



Maryland  
Green Registry  
**MEMBER**

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

## USDA, Agricultural Research Service Beltsville Agricultural Research Center (BARC)



10300 Baltimore Ave,  
Beltsville, MD 20705  
(301) 504-5557  
<http://www.ars.usda.gov/BARC>  
Federal Government  
Member since May 2010

### Management and Leadership

#### Environmental Policy Statement

*BARC is committed to continuous improvement practices that drive implementation of sustainability programs and green initiatives to minimize the impact of site operations and reduce the Center's environmental footprint. The BARC Environmental Policy Letter was issued February 27, 2009, and identifies Executive Order 13423 "Strengthening Federal Environmental, Energy, and Transportation Management" and Environmental Management System (EMS) development and implementation requirements referenced in ISO 14001 as guiding principles for achieving optimal environmental stewardship and compliance.*

*BARC's environmental policy stipulates that sustainable best environmental practices must be incorporated into the daily operations and strategic planning of activities and services involving the Center whenever possible <https://www.ars.usda.gov/ARUserFiles/80420500/BARC-Environmental-Policy-15-17.pdf>*

#### Environmental Teams

*BARC's campus exceeds 6000 acres that border the region's two major watersheds (i.e., 99.5% in the Anacostia Watershed and 0.5% in the Patuxent Watershed). Four major creeks/streams cross the BARC Campus, including the Paint Branch, Little Paint Branch, Indian Creek, and Beaverdam Creek). The Center's commitment to managing these resources through stewardship and*

*sustainability focuses on engaging employees to take leadership roles that align with these responsibilities.*

*Various teams have been established to advise the Center's leadership on environmental matters. Team membership is diverse, with participation from the Center leadership, real property management, engineering support, facility maintenance, environmental health and safety, purchasing, research support services, research laboratories, and state and local officials.*

- *The BARC Ecology Committee monitors activities and projects that can impact the region's ecosystems and recommends actions for the protection and restoration of affected waterways and adjacent pastures.*
- *The BARC Stormwater Management Group oversees management strategies and permits for point source and nonpoint source stormwater discharges at BARC, including an NPDES Phase II, MS4 General Stormwater Permit; municipal wastewater treatment and disposal plants; domestic water production and treatment plants; and CERCLA/National Priorities List ("SUPERFUND") site management.*
- *The BARC Recycling Committee identifies and discusses practical and sustainable solutions to reduce pollution.*
- *The BARC Environmental Management System (EMS) Committee was established in FY 2009 to facilitate the development of Center policies, environmental compliance and stewardship programs, local protocols, and best management practices.*

**Annual Environmental Goals**

*BARC's overarching environmental goal is to find opportunities to enhance and improve the Center's EMS.*

*BARC management used ISO-14001 standards to complete a comprehensive review of the EMS in FY 2012, focusing on progress in meeting regulatory, Agency, and Center performance objectives. The review identified significantly improved nutrient management practices as a major asset in pollution prevention efforts. More recently, the Center has focused on modifications and upgrades to on-site wastewater treatment systems to meet increasingly stringent environmental standards.*

**Environmentally Preferable Products and Services**

*BARC adheres to federal procurement policies and guidelines that encourage the selection of green products that can be recycled and/or are manufactured from sustainable or recycled materials. Service providers are*

*expected to make environmentally responsible choices in terms of the products and materials that are used on the BARC campus.*

**Environmentally Preferable Purchasing**

*BARC expects suppliers and vendors to adhere to environmentally-responsible procurement practices. The Center's procurement plan establishes a clear preference for GSA vendors that provide green products.*

**Environmental Restoration or Community Environmental Projects**

*BARC continues to provide support and resources that benefit local and regional environmental protection and sustainable restoration projects. Significant accomplishments include:*

- Completion of major reforestation and stream restoration projects in partnership with the Maryland State Highway Administration to mitigate the Inter-County Connector Project, with more than 10,000 trees planted on BARC property in 2012.*
- Ongoing membership in the Metropolitan Washington Council of Governments (MWWCOG) and the Baltimore-Washington Partners for Forest Stewardship (BWPFS), which led to planting of 200 additional trees on BARC property in 2013.*
- Active participation on local and regional committees and councils that align with Chesapeake Bay restoration efforts, combined with conservation farming practices that preserve ground and surface water resources (i.e., crop rotation, no-till and cover crop techniques, optimal nutrient management, judicious pest and invasive species control programs, and other conservation buffer practices).*
- Recognized advocate for biodiversity and conservation, leading programs aimed at preserving native and endangered species through planting of pollinator-friendly gardens, ongoing habitat and wetlands restoration projects, and non-invasive monitoring of indigenous plants, birds, and wildlife populations.*

## **Waste**

**Solid Waste Reduction and Reuse**

*BARC has adopted a comprehensive pollution prevention strategy that includes employee education, environmentally friendly purchasing protocols, compliance, and reporting. Notable practices include programs that promote recycling, reuse, and sharing of equipment, supplies, and furniture in laboratories*

*and offices to reduce waste generation on campus. BARC also transfers surplus produce, vegetables, and fruit to local food banks and agencies to reduce food waste.*

**Recycling**

*In accordance with Executive Order 13101 “Greening the Government through Waste Prevention, Recycling, and Federal Acquisition,” BARC actively recycles five waste streams that include white paper; cardboard; type I and II plastics; aluminum; ink and toner cartridges; waste lamps; oil and fuel filters; batteries; coolants; and oil. The BARC Recycling Committee administers the program and provides the Center’s leadership with recommendations to further enhance and expand efforts. Strategic implementation of campus-wide recycling and composting programs that have substantially decreased the production, storage, and disposal of on-site waste. Prior to the pandemic, BARC was recycling roughly 1,000 pounds of cardboard and paper and 10 totes of aluminum, plastics, and toner cartridges each week on average.*

**Composting**

*BARC maintains a two-acre composting facility that has been in operation for over a decade and supports research efforts focused on improving compost procedures and products as an alternative to landfills. Projects have led to discovery of new techniques to prepare organic-rich compost blends from bulky organic materials, vegetative waste, and animal manure. These materials can be custom designed to improve soil, enhance stormwater and runoff management practices, and increase crop yield under a variety of different weather and landscape conditions.*

**Hazardous Waste/Toxic Use Reduction**

*Sharing and exchange of hazardous chemicals between laboratories is encouraged and has led to a continuous decline in the purchase and disposal of these materials. Aqueous-based parts washers have replaced solvent-based washers to reduce hazardous waste generation associated with these activities.*

**Energy**

**Energy Efficiency**

*BARC has established a phased replacement cycle to upgrade equipment and electronics with newer and more energy-efficient models. Campus lighting systems are being retro-fitted with LED-compatible fixtures and motion and light-*

*activated sensors to minimize energy use. New construction and building renovations utilize sustainable materials and incorporate energy-saving technology and design options, such as solar tempering features, insulated windows and doors, and high-efficiency heating and cooling systems.*

**Renewable Energy**

*BARC is actively exploring options to install ground mount solar panels on acreage that was previously farmed and determined to be lower yield/less productive land, as a source of renewable energy to offset the electricity needs for the Center.*

## **Transportation**

**Employee Commute**

*The Center participates in the Federal Transportation Subsidy Program, which was established by Congress to encourage employees to use mass transit for commuting to and from work. A free campus shuttle transports program participants between campus and local metro rail and bus stations. During peak enrollment periods, an estimated 200 employees use this service every week. The Center also supports flexible work arrangements, depending on business needs. Employees whose work assignments can be completed remotely have the option to telework.*

**Efficient Business Travel**

*Although business travel is often necessary to fulfill the Center's mission, virtual meetings have evolved as an effective alternative to travel and were used extensively throughout the pandemic to maintain continuity of operations. Maximizing the use of technology to maintain effective communication has had a positive net impact on work-life balance and the environment. Onsite conference rooms are equipped with various presentation support technologies, and all employees have access to government-furnished equipment that allows remote participation in web meetings, teleconferences, and videoconferences.*

**Efficient Fleet Vehicles**

*BARC has implemented a data-driven management system for government-owned vehicles, which aims to selectively replace a proportion of older, high mileage, and less efficient models with newer, more efficient options every year. The net impact has been a smaller, more dependable, and highly*

*economic fleet that offers greater fuel efficiency and a significant reduction in annual carbon dioxide emissions.*

*In 2019, all government-owned vehicles were equipped with telematics devices to track asset utilization and improve fleet management operations.*

## **Water**

### **Water Conservation**

*BARC has made a public commitment to conserve water resources through sustainable agricultural practices that include strategic installation of high efficiency greenhouse watering systems, crop rotation, planting of drought-tolerant crops, mulch application, re-use of gray water sources for agricultural purposes, and optimal irrigation practices.*

### **Stormwater Management and Site Design**

*Campus programs include well-maintained vehicles, closed and plugged dumpsters for waste collection, monitoring of effluent discharge levels, and installation of retention ponds and grassed swales to collect run-off. Facility construction and renovations adhere to approved site plans, which include practices to manage storm water, erosion, and sediment during all phases of construction. Buildings and facilities follow practices to prevent ground and surface water contamination, which include secondary containment for hazardous materials storage, drip pans, spill kits, and an integrated pest management program that minimizes the use of chemicals for control.*

*BARC manages nonpoint source stormwater through a state-issued general stormwater permit, which is administered by the Center's Stormwater Management Group. Specific activities and operations that require an NPDES permit are the responsibility of the individual permit-holding management unit. The designated unit must ensure runoff is properly mitigated through stormwater site designs consistent with established Best Management Practices (i.e., rain gardens, retention areas, etc.); employees are trained and qualified to maintain the sites; stormwater retrofits are inspected and in working order; and necessary equipment is serviceable and operating efficiently.*

*BARC is also making steady progress toward restoration of impervious surface area to meet stormwater waste load allocation requirements established in Maryland's Watershed Implementation Plan for meeting the Chesapeake Bay Total Maximum Daily Load (TDML) in accordance with Executive Order 13508.*

## Green Building

- While our facilities are not certified to LEED or other green building standards, an environmental impact study is required for all capital improvement projects, including new construction and major renovations to existing structures. The study includes consideration of options to improve energy efficiency, utilize sustainable materials, and minimize waste.*

***Profile Updated July 2021***



*Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.*

*Learn more at [green.maryland.gov](http://green.maryland.gov)*

